



Paul E. Helliker
Director

Department of Pesticide Regulation



Gray Davis
Governor
Winston H. Hickox
Secretary, California
Environmental
Protection Agency

May 31, 2002

WHS 02-04

TO: COUNTY AGRICULTURAL COMMISSIONERS

SUBJECT: REVIEW OF REVISED PESTICIDE SAFETY INFORMATION SERIES
LEAFLETS

In response to participation in several focus and work groups, and discussions with advocates, county agricultural commissioners (CAC), and agricultural production groups, we identified a need to revise the Pesticide Safety Information Series (PSIS) leaflets. A comment frequently made regarding PSIS is that the material is too technical for users to understand, and not an effective tool for reaching its intended audience, pesticide handlers and farm workers. In 2000, we proposed changes to PSIS leaflets A-8 and A-9, and obtained input from CAC and worker advocates. Due to time constraints and lack of resources, only some of the changes were incorporated.

This year, we initiated a project to improve all the PSIS leaflets. The goal of this project is to ensure the information in PSIS leaflets is very easy for farm workers and pesticide handlers to read and understand. We are using the existing PSIS leaflets as templates, changing or deleting language where appropriate, and adding more graphics. We hope to have most PSIS leaflets down to one page, front and back. An unfortunate side effect of this simplification could be a loss in specificity for some regulatory requirements. However, we feel the trade-off is worthwhile if the leaflets are more understandable for the target audience of employees.

Attached are copies of the simplified PSIS A-1, A-5, and A-9; we are using these 3 leaflets to test our ideas. I ask you or your staff to review these documents and weigh the loss in specificity against what we hope is an improvement in understanding. We would like your comments by June 28, 2002 to assist us with this project.

If you have any questions, please direct them and any comments you have on the revised documents to Ms. Susan McCarthy (916) 445-6387 or smccarthy@cdpr.ca.gov.

[Original signed by C. Andrews]

Charles M. Andrews, Chief
Worker Health & Safety Branch
(916) 445-4260

Attachments

FLEX YOUR POWER! For simple ways to reduce energy demand and costs, see <www.cdpr.ca.gov>.



County Agricultural Commissioners
May 31, 2002
Page 2

cc: Ms. Susan McCarthy, Program Specialist (w/o attachments)
Mr. Daniel J. Merkley, County Agricultural Commissioner Liaison (w/ attachments)
Mr. Scott Paulson, Chief, Enforcement (w/ attachments)

Pesticide Safety *Information*

Worker Health and Safety Branch

Series A

A-1

SAFETY REQUIREMENTS FOR PESTICIDE HANDLERS In Agricultural Settings

This leaflet explains pesticide safety requirements for workers who mix, load, or apply pesticides, repair or clean contaminated equipment, or handle unrinsed pesticide containers.



Why Should I Be Concerned About Pesticides?

Pesticides can get into your body many different ways, and can have both acute and chronic effects. If a pesticide can hurt you or make you sick right away, that's called an acute effect. If it takes years for a pesticide to make you sick, that's called a chronic effect. Pesticides can move through your skin or eyes, or be breathed into your body and make you sick. Getting pesticides on your hands is often a problem. Once on your hands you can get pesticides in your eyes by rubbing them or in your mouth by touching your food. Keeping pesticides off of your hands is often the hardest part of working safely with pesticides.

What Does the Label Tell Me?

Most pesticide labels display a "signal word" that tells you of the acute health hazard. The signal words are as follows:

- "Danger" means the pesticide is extremely harmful
- "Warning" means moderately harmful
- "Caution" means less harmful

If the label does not have a signal word, it means that the pesticide is unlikely to harm you. However, **always** handle pesticides carefully.

You must use pesticides according to the label directions. For some pesticides, California has stricter rules than those on the label. Your boss must know these rules and tell you about them.

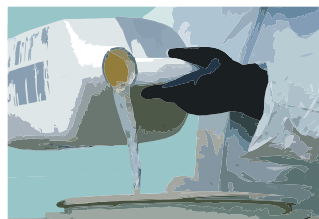
What Safety Rules Do I Need to Follow?

- After reading the label, take a look at the application situation (weather, people or buildings around you). It may be dangerous to apply pesticides in open areas if there is no wind and a high temperature because

the pesticide will stay in the air. On the other hand, too much wind means pesticides can drift onto people and other crops. Be sure there are no people in the field or close by when you spray. Pesticide spray may drift onto them and make them sick. You must look at all these conditions and decide if it's safe to apply a pesticide.



- Hand pouring and moving pesticides before they are mixed is the most dangerous part of handling pesticides. After a pesticide is mixed and loaded into



the application equipment, it may be less dangerous. However, even when handling the diluted pesticide, you should always

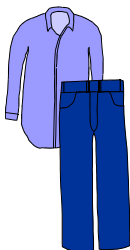
try to avoid getting spray on yourself.

- You must wear eye protection when you mix, load or apply pesticides, clean equipment, or flag for an aerial application.
- Ways to protect your eyes include wearing goggles, safety glasses, or a face shield. Pilots can use a visor for eye protection. Regular eyeglasses and sunglasses DO NOT provide adequate eye protection because pesticides can easily get under regular glasses and into your eyes.
- If you mix or load liquid pesticides with the signal word "DANGER" on the label, you must use a closed system. See PSIS A-3 for more information on closed systems.
- If you mix or load pesticides, repair or clean pesticide equipment, or hand apply (including using hand-held equipment) pesticides your boss must provide you with clean or new gloves each day and you must use them.





- If the label does not list the type of glove needed, you must use gloves made of rubber, neoprene or other chemical-resistant material. Fabric lined gloves do not meet safety requirements.
- In rare cases when the label specifically states that the handler not use gloves, they must not be worn.
- You must wear a respirator while you are using pesticides that are poisonous when you breathe them, such as fumigants, powders, dusts, and some liquids. See PSIS A-5 for more information about respirators.
- You must wear a respirator if the label says to avoid breathing spray mist, or when mixing/loading or applying most pesticides on the Minimal Exposure Pesticide list. PSIS A-10 contains more information on Minimal Exposure Pesticides.
- If you handle pesticides with the signal word "DANGER" or "WARNING" on the label, your boss must provide you with clean coveralls (long sleeved shirt and long pants) every day you use these pesticides.
- If the pesticide label or California laws require the use of chemical-resistant protection, your boss must provide a clean chemical-resistant suit, apron (if specified), footwear and headgear that cover your body, feet and head.



- When it's hot outside, heat stress from wearing chemical resistant clothing is very dangerous to your health. If you have to wear a chemical resistant suit, you must not work in temperatures above 80°F during the day or 85° during nighttime hours.



- Your boss must provide a place to change clothes and wash at the end of the day.
- Your boss must provide water, soap and towels for washing your hands and face in the field, and also must supply water for emergency eye flushing and washing the entire body in case of an accident.



How Do I Learn About Safety Requirements?

California laws require that you be trained before you handle pesticides. For each pesticide or chemical group of pesticides, your training must include:

- the meaning of safety statements on the pesticide label
- the dangers of the pesticides you will be using
- ways pesticides can enter your body
- symptoms of pesticide poisoning
- emergency first aid
- how to get emergency medical care
- everyday and emergency decontamination procedures
- why you need PPE, how to care for it, and what it can't protect you against
- symptoms and first aid for heat-related illness, and how to prevent it
- safety requirements and procedures
- information about dangers to the environment
- instructions not to take pesticides or their containers home
- applicable laws, Material Safety Data Sheets, and PSIS leaflets
- the purpose of medical supervision, if applicable
- where you can find written Hazard Communication Information (PSIS A-8)
- your rights.



This leaflet helps readers to understand pesticide regulations. It is not a legal document. The written rules are found in the California Code of Regulations, Title 3. The words "must" and "should" as used in this document are not the same. The word "must" means the action is required and comes from California rules. The word "should" means the actions are additional handling practices that are recommended to reduce exposure.

Pesticide Safety *Information* Series A

Worker Health and Safety Branch

A-5

RESPIRATORY PROTECTION In Agricultural Settings

This leaflet provides basic information to pesticide users on use of respirators. You and your boss must follow California regulations so you can safely wear a respirator.

Your boss must have a written respiratory protection program at your work site. This program covers how to choose the right respirator, making sure it fits you, use, inspection, and cleaning of your respirator.

When should you wear a respirator?

The best way to control pesticides in the air is to use mechanical equipment to control the air in your work area. Examples of mechanical controls include an enclosed tractor cab that filters the air or fans to remove the pesticides from the air. Sometimes, spraying pesticides can leave those pesticides in the air where you work. If mechanical equipment cannot control the pesticides in the air, you need to use a respirator.



The pesticide label will tell you if you need to use a respirator. If the label says something like "avoid breathing spray", you should wear a respirator when mixing, loading or spraying.

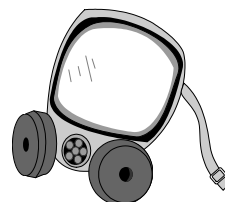
Your boss must provide a respirator when it is needed and you must wear the respirator provided. On the outside of the respirator it must say that it is approved by the National Institute for Occupational Safety and Health (NIOSH).

What training do you need?

You must receive training about how to safely use a respirator before you first use it. Training must be given to you every year. Training must include when you need to wear a respirator, how to safely wear it, how to clean it and what the respirator can't protect you against.

How do you get the right respirator?

Respirators come in different sizes. It is very important that the respirator fits your face. You must know how to check your respirator fit. When checking your respirator, wear it in an area where there are no pesticides to get used to it. Then test to be sure it fits your face. Your boss or someone he hires will show you how to test it.



There are different kinds of respirators that will protect you from different dangers. When exposed to pesticides that irritate the eyes, wear a full-face respirator (like in the picture). Your boss will provide you with the right kind of respirator.

Taking care of your respirator:

Your boss must repair or replace your respirator as necessary due to wear and tear. A trained person should regularly clean and inspect frequently used respirators. Because of the possibility of spreading disease, do not pass respirators from one person to another without cleaning and sanitizing. To avoid this situation, each person should have his own respirator or use disposable respirators.



Store respirators so the face piece does not become bent and is protected from exposure to dust, sunlight, extreme temperatures, moisture or damaging chemicals. Rigid plastic containers with lids provide good storage for Most respirators.



Respirators kept for emergency situations, such as gas masks and self-contained breathing apparatus (SCBA), should be inspected once a month. Your boss must keep a written record of the most recent inspection on the respirator or its storage container.



Who can use a respirator?

Breathing through a respirator can be very hard for some people. If you need to wear a respirator, your boss must inform you that there are medical conditions that may keep you from using a respirator, and must keep written evidence on file that you were informed. Some medical conditions that affect respirator use are high blood pressure, heart disease, lung disease or a perforated eardrum.



If you have such a condition, a doctor must examine you to see if you are physically able to do the assigned work using a respirator. Your boss must follow the doctor's written orders concerning your capability to wear a respirator.

If you have told your boss of a possible medical condition, a record of the doctor's evaluation must be on file **before** you are required to perform any work that requires you to wear a respirator.

How can you tell your respirator is working?

Most respirators do not "purify" the air, they simply filter out most harmful chemicals in the air. Respirator filters will only protect you for a limited time. Once this time is up, the pesticide will pass through the filter and you will breathe it in. If you notice an odor or taste, or feel eye or throat irritation, leave the area immediately; go to a safe area that contains no pesticides. Then inspect your respirator for any wear or tear. You may need to change the respirator filter if you find no physical problems with the respirator. Because filters only work for a limited time, and many pesticides do not have an odor or cause irritation,



the filter must be replaced according to one of the following guidelines (whichever is the most frequent):

- directions on the pesticide label
- equipment manufacturer's recommendations
- when you first notice odor, taste or irritation
- at the end of each day's work period.

Most respirators do not provide oxygen. Do not use these respirators in situations where the oxygen content of the air



might be low. In low oxygen situations, use equipment such as a self-contained breathing apparatus (a respirator that connects to a tank that contains air) or an air-line respirator.

If you have a beard, mustache, or long sideburns, you cannot work where respirators are required unless provided with a respirator that does not require a face-to-face piece seal for proper operation.



Respirators only protect you from inhaling chemicals. In most situations where pesticides are used, protecting your skin is also important.

This leaflet helps you to learn about pesticide regulations. It is not a legal document. The written rules are found in the California Code of Regulations, Title 3. The words "must" and "should" as used in this document are **not** the same. The word "must" means the action is required and comes from California rules. The word "should" means the actions are additional handling practices that are recommended to reduce exposure.

Pesticide Safety

Worker Health and Safety Branch

Information

Series A

A-9

HAZARD COMMUNICATION FOR EMPLOYEES WORKING IN AGRICULTURAL FIELDS*

*** Employers: Fill in the blank lines on page 1 and display this handout where employees work in treated fields.**

This leaflet tells you about your right to know about dangers where you work. Your boss must know and tell you (in a language you understand) about pesticides that have been sprayed at your workplace, and how you should protect yourself from them.



Pesticides are only one kind of danger at your work. If you have a complaint about a pesticide safety problem, you should call the county agricultural commissioner. Other health and safety complaints (bathrooms, drinking water, etc.) should be filed with the California Department of Industrial Relations-Cal/OSHA office. You can find the telephone numbers in the government pages of the telephone book.

What Are My Rights?

You must be told about possible dangers where you work. You must also be trained to recognize and avoid those dangers. You have the following rights:

- You have the right to know what pesticides have been used where you work. You can look at this information without having to ask for it. As part of your training, you must be told where to find the information.
- Your boss must plan ahead for medical care, and must make sure that you are taken to the doctor immediately if pesticides make you sick or hurt you at work.
- You have the right to look at Material Safety Data Sheets (MSDS). The MSDS tells you about the pesticide, its dangers and the protections needed.



Medical care is available at:

- You have the right to file complaints about the dangers at work without being punished or fired. Your boss will not be told who filed the complaint.
- If you get sick or hurt at work, you can file for worker's compensation. Workers' compensation will pay for your medical costs, and sometimes, lost pay.

Your boss must explain your rights to you. If you need more help in understanding your rights, go to your local county agricultural commissioner's office, local legal aid, worker's rights office, union or DPR. The DPR offices are: Anaheim (714) 680-7800; Fresno (559) 445-5401; or Sacramento (916) 372-6892.

Where Can I Learn What Pesticides Have Been Used Where I Work?

The farmer must keep records on all pesticide applications. If you are not sure of where the records are kept, ask your boss. You can find the pesticide records at:



The information must include:

- when and where the pesticide was applied
- the restricted entry interval (REI)
- name of the pesticide
- active ingredient name
- the US EPA registration number

What Kind of Training Should I Get?

Before you work in sprayed fields, your boss must make sure you are trained. You must get training at least every five years. The training must include:

- your rights as an employee
 - why you should shower or wash after work
 - an explanation of REIs and posting
 - where you might be in contact with pesticides
 - how pesticides can get in your body
 - how pesticides can make you sick
 - pesticide illness and injury symptoms
 - first aid, and where you can get medical care
 - why you should not take pesticides home
- If you are told to mix or apply pesticides, you must have more training on how to do that job safely.

What Should I Do IF I Start Feeling Sick at Work?

Pesticides can make you sick. Symptoms of pesticide poisoning can be the same as having the flu or other common illnesses. If you get a headache, dizziness, upset stomach, blurred vision, other flu-like symptoms, a rash, or eye pain while working in the field, you should ask your boss to take you to the doctor. These symptoms might be caused by pesticide exposure. Your boss must have plans for medical care and see that you are taken to the doctor if you get sick or hurt on the job. Do not drive yourself to the doctor if you are sick.



You can get skin rashes from pesticides or from plants and insects in the field. Take a bath or shower after working in fields to remove pesticides or plant juices.

How Can I Protect Myself from Pesticides?

Pesticide labels tell you how to protect yourself from pesticides. That is why the label tells you to wear certain protections (such as gloves or pants and a long-sleeved shirt), and why there is time after a pesticide application when you cannot go back into a field, called a restricted entry interval (REI).



might go into or even near a sprayed field or greenhouse, the farmer or your boss must tell you:

- about the pesticide sprayed
- what you must do to protect yourself
- how long to stay out of the field

If you work for a farm labor contractor, the labor contractor must tell you about these things. Follow the directions about staying out of sprayed fields and greenhouses. If you will touch plants or other sprayed things, do not work in a field during a REI.

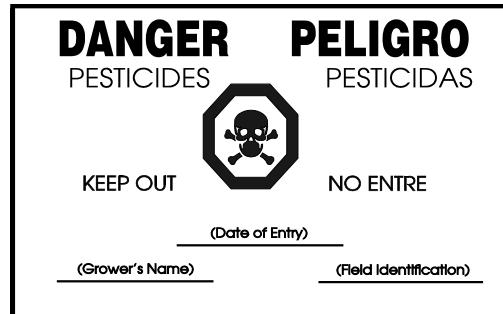
If you are irrigating or driving a tractor, you can work in a field during an REI, as long as you do not touch sprayed plants or equipment. However, you must be told the following:

- the pesticide sprayed and the length of the REI,
- how to protect yourself
- to take a shower or bath after work.

If you go into a sprayed field before the REI is over, you must wear the same safety gear that the applicator wears; it is listed on the pesticide label. Your boss must provide you with any safety gear needed. If you handle unsprayed irrigation equipment and do not touch the plants or other sprayed surfaces, you can work in a field before the REI is over for 8 hours per day. If you handle irrigation equipment that was sprayed and the REI is still in effect, you can only work in that field for 1 hour per day. Working in a sprayed field is not allowed for the most dangerous pesticides.



If you see a sign that looks like this, it means stay out of the field!



What Does Restricted Entry Interval Mean?

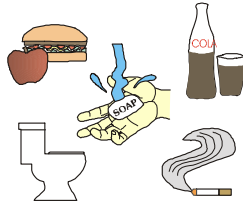
A restricted entry interval (REI) is the time after a pesticide is sprayed that you are not allowed to work in the field. If you touch a sprayed plant during an REI, you might become sick. After a pesticide is sprayed on a plant it begins to go away; this takes longer for some pesticides than for others. You must not go into a field for any reason for at least 4 hours after any pesticide application. If you

This leaflet helps you to learn about pesticide regulations. It is not a legal document. The written rules are found in the California Code of Regulations, Title 3. The words "must" and "should" as used in this document are **not** the same. The word "must" means the action is required and comes from California rules. The word "should" means the actions are additional handling practices that are recommended to reduce exposure.

SAFETY TIPS



- Protect your skin
- Wear clothes with long sleeves and long pants, shoes or boots, socks, a hat and/or scarf and gloves
- Make sure they are clean and without holes



- Always wash your hands before eating, drinking, smoking, chewing gum or going to the bathroom
- Do not cook food with wood found in the field



- Take a bath or shower as soon as you get home from work
- Wash with soap & water and use shampoo on your hair
- Put on clean clothes



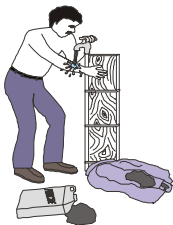
- Pesticides get on work clothes and then on your skin
- Wash work clothes before wearing them again
- Wash work clothes separate from other clothes
- Never put pesticides in food containers
- Do not take farm pesticides or their containers home
- Keep children away from pesticides

ILLNESS/INJURY



- Pesticides get on your skin and clothes when you touch sprayed plants, soil, irrigation water or are exposed to spray drift
- They can move from your clothes and onto your skin
- Some pesticides easily go through your skin and can make you sick.
- Tell the boss if you are sick or hurt at work
- If the illness/injury is work-related, your employer will pay for all medical care of that illness
- If the condition is work-related you may be paid for your time off work while sick or hurt

FIRST AID



- Wash immediately with the closest clean water if pesticides are spilled or sprayed on your clothes or skin
- Change into clean clothes
- Tell your boss about the spill after washing
- Wash if your eyes or skin begin to itch or burn
- Use lots of water
- Tell your boss you should go to a doctor
- If you feel sick at work (headache, stomach ache, vomiting, dizzy) tell your boss
- He or she can make sure you are taken to a doctor

- Have someone else drive you to the doctor if you are sick or injured

Proposition 65

In 1986, a law called the *Safe Drinking Water and Toxic Enforcement Act of 1986* (Proposition 65) was passed. Proposition 65 requires California to make a list of chemicals that cause cancer, birth defects, or other reproductive harm. The Proposition 65 list contains many different chemicals, including dyes, solvents, pesticides, drugs, and food additives. If a pesticide is on the Proposition 65 list, your boss must warn you if you could be exposed to enough pesticide to result in a significant health risk. Your boss may also choose to warn you if a pesticide on the Proposition 65 list has been sprayed, even if health problems are not likely. Your boss is required to keep information on each pesticide application and allow you to look at it. If you are not sure of the record location, ask your boss. The following table lists pesticides that are on the Proposition 65 list and that might be used in California.

CURRENTLY REGISTERED PESTICIDES ON THE PROPOSITION 65 LIST

PESTICIDES KNOWN TO THE STATE TO CAUSE CANCER

Alachlor	DDVP (dichlorvos)	Formaldehyde (gas)	o-Phenylphenate, sodium
Arsenic acid	p-Dichlorobenzene	Iprodione	(o-phenylphenol, sodium)
Arsenic pentoxide	1,3-Dichloropropene	Lindane	o-Phenylphenol
Arsenic trioxide	Diethyl phthalate	Mancozeb	Propargite
Cacodylic acid	Dipropyl	Maneb	Pronamide (propyzamide)
Captan	isoinchomeronate	Metam Sodium	Propylene oxide
Chlorothalonil	Ethoprop	Metiram	Silica aerogel
Chromic acid	Ethylene oxide	Oxadiazon	Sodium dichromate
Creosote	Fenoxycarb	Oxythioquinox	Thiodicarb
Daminozide	Folpet	Pentachlorophenol	Vinclozolin

PESTICIDES KNOWN TO THE STATE TO CAUSE BIRTH DEFECTS OR REPRODUCTIVE HARM

Amitraz	Disodium cyano-	Methyl bromide (as a	Resmethrin
Arsenic, pentoxide	dithiomidocarbonate	structural fumigant)	Sodium
Arsenic, trioxide	EPTC (ethyl dipropyl-	Myclobutanil	dimethyldithiocarbamate
Benomyl	thiocarbamate	Nabam	Sodium fluoracetate (1080)
Bromacil, lithium salt	Ethylene oxide	Nicotine	Streptomycin sulfate
Bromoxynil octanoate	Fenoxaprop ethyl	Nitrapyrin	Thiophanate methyl
Chlorsulfuron	Fluazifop butyl	Oxadiazon	Triadimefon
Cyanazine	Fluvalinate	Oxydemeton-methyl	Tributyltin methacrylate
Cycloate	Hydramethylnon	Potassium	Triforine
2,4-D butyric acid (2,4-DB)	Linuron	dimethyldithiocarbamate	Vinclozolin
Diclofop methyl	Metam sodium	Propargite	Warfarin
	Metiram		